



MICHIGAN

OFFICE OF THE AUDITOR GENERAL

AUDIT REPORT



THOMAS H. MCTAVISH, C.P.A.
AUDITOR GENERAL

The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.

– Article IV, Section 53 of the Michigan Constitution

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Michigan
Office of the Auditor General
REPORT SUMMARY

Performance Audit

Report Number:
761-0175-07

Laboratory Data Quality Assurance

Department of Environmental Quality

Released:
April 2008

The mission of the Department of Environmental Quality's (DEQ's) Environmental Laboratory is to provide the best possible service in the most cost-effective manner for the State, to serve as the State's reference laboratory, and to provide consulting services to the private sector and the general public. The laboratory data quality recognition program is a voluntary program to identify private laboratories that are qualified to submit analytical data to DEQ.

Background:

Section 324.20513(2) of the *Michigan Compiled Laws* requires the Auditor General to conduct and submit to the Legislature a report on a performance post audit described in subsection (1) within one year after the effective date of this Section and every two years thereafter.

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Audit Objective:

To assess the effectiveness of DEQ's efforts to ensure the accuracy of analytical data generated by its Environmental Laboratory.

Audit Conclusion:

We determined that DEQ was effective in its efforts to ensure the accuracy of analytical data generated by its Environmental Laboratory. Our report does not include any reportable conditions related to this audit objective.

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Audit Objective:

To assess whether the operating costs of DEQ's Environmental Laboratory were reasonable relative to the operating costs of comparable private laboratories that met the requirements for successful participation in the laboratory data quality recognition program.

Audit Conclusion:

As of October 31, 2007, DEQ had not implemented a laboratory data quality recognition program. Therefore, we could not assess whether the operating costs of DEQ's Environmental Laboratory were reasonable relative to the operating costs of comparable private laboratories that met the requirements for successful participation in the laboratory data quality recognition program. Our report does not include any reportable conditions related to this audit objective.

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Audit Objective:

To assess the adequacy of the statutory fees for the laboratory data quality recognition program to meet the minimum requirements of the enabling legislation.

Audit Conclusion:

As of October 31, 2007, DEQ had not implemented a laboratory data quality recognition program. Therefore, we could not determine whether the statutory fees for the program were adequate to meet the minimum requirements of the enabling legislation. However, we noted one reportable condition (Finding 1).

Reportable Condition:

DEQ should seek additional appropriations or an increase in fees to sufficiently fund the laboratory data quality recognition program or seek amended legislation to abolish the program (Finding 1).

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Supplemental Information:

Our audit report provides data and comparisons related to the estimated costs and estimated revenues of the laboratory data quality recognition program.

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Agency Response:

Our audit report contains 1 finding and 1 corresponding recommendation. DEQ's preliminary response indicates that it agrees with the finding and will comply with the recommendation.

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A copy of the full report can be obtained by calling 517.334.8050 or by visiting our Web site at: <http://audgen.michigan.gov>



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THOMAS H. MCTAVISH, C.P.A.
AUDITOR GENERAL

April 1, 2008

Mr. Steven E. Chester, Director
Department of Environmental Quality
Constitution Hall
Lansing, Michigan

Dear Mr. Chester:

This is our report on the performance audit of Laboratory Data Quality Assurance, Department of Environmental Quality.

This report is issued pursuant to Section 324.20513(2) of the *Michigan Compiled Laws*, which states that the Auditor General shall conduct and submit to the Legislature a report on a performance post audit described in subsection (1) within one year after the effective date of this Section and every two years thereafter.

This report contains our report summary; description of agency and program; audit objectives, scope, and methodology and agency responses; comments, finding, recommendation, and agency preliminary response; two exhibits, presented as supplemental information; and a glossary of acronyms and terms.

Our comments, finding, and recommendation are organized by audit objective. The agency preliminary response was taken from the agency's response subsequent to our audit fieldwork. The *Michigan Compiled Laws* and administrative procedures require that the audited agency develop a formal response within 60 days after release of the audit report.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

A handwritten signature in black ink, reading "Thomas H. McTavish".

Thomas H. McTavish, C.P.A.
Auditor General

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GLOSSARY

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Description of Agency and Program

Environmental Laboratory

The Environmental Laboratory, within the Environmental Science and Services Division, Department of Environmental Quality (DEQ), analyzes environmental samples for DEQ's environmental programs and other State departments. The Environmental Laboratory's mission* is to provide the best possible service in the most cost-effective manner for the State, to serve as the State's reference laboratory, and to provide consulting services to the private sector and the general public.

The Environmental Laboratory is divided into two units. The Organic Unit is dedicated to analyzing organic compounds, including solvents such as methylene chloride, trichloroethylene, benzene, and toluene; chlorinated pesticides such as dichlorodiphenyl-trichloroethane, dieldrin, and chlordane; and other organic compounds such as polychlorinated biphenyls, phenols, and polynuclear aromatic hydrocarbons. Most of these compounds are highly toxic, persistent in the environment, or bioaccumulative in animals and humans. The Inorganic Unit is dedicated to analyzing inorganic or noncarbon-containing compounds such as heavy metals (e.g., lead, mercury, and arsenic) and a host of water quality parameters such as biological oxygen demand, chemical oxygen demand, cyanides, and nutrients.

Sources of the samples include hazardous waste sites, rivers and lakes, discharges from specific sources, and accidental spills of hazardous chemicals. The types of samples include air, water, soil, oil, hazardous waste, and sewage sludge.

The Environmental Laboratory is located in a 27,000-square-foot laboratory facility in Lansing. As of September 30, 2007, the Environmental Laboratory had 33.5 full-time equated employees. For the period October 1, 2006 through September 30, 2007, the Environmental Laboratory conducted 107,655 tests and expended \$3.7 million.

Laboratory Data Quality Recognition Program

Effective July 21, 2004, the amendments to the Natural Resources and Environmental Protection Act (NREPA), specifically Sections 324.20501 - 324.20519 of the *Michigan*

* See glossary at end of report for definition.

Compiled Laws (also known as the V. Harry Adrounie Laboratory Data Quality Assurance Act), requires DEQ to implement a laboratory data quality recognition program. The purpose of the laboratory data quality recognition program is to identify private laboratories that are qualified to submit analytical data to DEQ.

Participation in the laboratory data quality recognition program by a private laboratory is voluntary. To participate, private laboratories must submit an application to DEQ and pay a fee. Fees are based on DEQ's actual costs of administering the program, not to exceed \$750 for an initial application or \$500 for a renewal application. Private laboratories must grant DEQ access to their laboratory and laboratory records for inspections during business hours without prior notice. In addition, if required by DEQ, private laboratories must participate in proficiency testing conducted by a nationally recognized proficiency testing program. Successful participation by a private laboratory shall be recognized for a two-year period. As of October 31, 2007, the program had not been completely implemented, resulting in no private laboratories participating in the program.

To assist DEQ in monitoring and evaluating the laboratory data quality recognition program, Section 324.20517 of the *Michigan Compiled Laws* established a laboratory data quality assurance advisory council. This Section required the Governor to appoint council members by October 19, 2004; however, the council members were never appointed. On July 15, 2007, through Executive Order No. 2007-10, the Governor abolished the laboratory data quality assurance advisory council.

Section 324.20513(2) of the *Michigan Compiled Laws* requires the Auditor General to conduct and submit to the Legislature a report on a performance post audit described in subsection (1) within one year after the effective date of this Section and every two years thereafter. Also, this Section requires the Auditor General to audit the following:

- a. The quality of the analytical data generated by DEQ's Environmental Laboratory.
- b. The costs of operating DEQ's Environmental Laboratory relative to the costs of operating comparable private laboratories that meet the requirements for successful participation in the laboratory data quality recognition program, to the extent that sufficient data is available.
- c. The adequacy of the fees provided for in Section 324.20507 of the *Michigan Compiled Laws*.

Audit Objectives, Scope, and Methodology and Agency Responses

Audit Objectives

Our performance audit* of Laboratory Data Quality Assurance, Department of Environmental Quality (DEQ), had the following objectives:

1. To assess the effectiveness* of DEQ's efforts to ensure the accuracy of analytical data generated by its Environmental Laboratory.
2. To assess whether the operating costs of DEQ's Environmental Laboratory were reasonable relative to the operating costs of comparable private laboratories that met the requirements for successful participation in the laboratory data quality recognition program.
3. To assess the adequacy of the statutory fees for the laboratory data quality recognition program to meet the minimum requirements of the enabling legislation.

Audit Scope

Our audit scope was to examine the program and other records of the Environmental Laboratory and the laboratory data quality recognition program. Our audit was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and, accordingly, included such tests of the records and such other auditing procedures as we considered necessary in the circumstances. Our audit procedures, conducted from August through October 2007, generally covered the period July 21, 2004 through October 31, 2007.

Supplemental information was provided by DEQ and is presented in Exhibits 1 and 2. Our audit was not directed toward expressing an opinion on this information and, accordingly, we express no opinion on it.

* See glossary at end of report for definition.

Audit Methodology

We conducted a preliminary review to obtain an understanding of laboratory data quality. This included interviewing DEQ staff and reviewing applicable statutes, rules, policies and procedures, reports, and other reference materials.

To accomplish our first objective, we reviewed the Environmental Laboratory's quality assurance program plan. We examined documentation related to analytical data generated by the Environmental Laboratory to determine that it was compliant with DEQ's quality assurance program plan. In addition, we reviewed the results of the Environmental Laboratory's proficiency tests.

To accomplish our second objective, we interviewed DEQ staff to obtain an understanding of the laboratory data quality recognition program. We identified the operational costs for DEQ's Environmental Laboratory. In addition, we compared the testing fees of the Environmental Laboratory to the testing fees of DEQ's contracted overflow laboratories to determine if the Environmental Laboratory's fees were comparable to private laboratories.

To accomplish our third objective, we identified the fees to participate in the laboratory data quality recognition program. We reviewed documentation of estimated costs and revenues pertaining to the laboratory data quality recognition program.

Agency Responses

Our audit report contains 1 finding and 1 corresponding recommendation. DEQ's preliminary response indicates that it agrees with the finding and will comply with the recommendation.

The agency preliminary response that follows the recommendation in our audit report was taken from the agency's written comments and oral discussion subsequent to our audit fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100) require DEQ to develop a formal response to our audit findings and recommendations within 60 days after release of the audit report.

COMMENTS, FINDING, RECOMMENDATION,
AND AGENCY PRELIMINARY RESPONSE

ACCURACY OF ANALYTICAL DATA

COMMENT

Audit Objective: To assess the effectiveness of the Department of Environmental Quality's (DEQ's) efforts to ensure the accuracy of analytical data generated by its Environmental Laboratory.

Audit Conclusion: We determined that DEQ was effective in its efforts to ensure the accuracy of analytical data generated by its Environmental Laboratory. Our report does not include any reportable conditions* related to this audit objective.

COMPARISON OF OPERATING COSTS

COMMENT

Audit Objective: To assess whether the operating costs of DEQ's Environmental Laboratory were reasonable relative to the operating costs of comparable private laboratories that met the requirements for successful participation in the laboratory data quality recognition program.

Audit Conclusion: As of October 31, 2007, DEQ had not implemented a laboratory data quality recognition program. Therefore, we could not assess whether the operating costs of DEQ's Environmental Laboratory were reasonable relative to the operating costs of comparable private laboratories that met the requirements for successful participation in the laboratory data quality recognition program. Our report does not include any reportable conditions related to this audit objective.

ADEQUACY OF STATUTORY FEES

COMMENT

Audit Objective: To assess the adequacy of the statutory fees for the laboratory data quality recognition program to meet the minimum requirements of the enabling legislation.

** See glossary at end of report for definition.*

Audit Conclusion: As of October 31, 2007, DEQ had not implemented a laboratory data quality recognition program. Therefore, we could not determine whether the statutory fees for the program were adequate to meet the minimum requirements of the enabling legislation. However, we noted one reportable condition related to amended legislation (Finding 1).

FINDING

1. Amended Legislation

DEQ should seek additional appropriations or an increase in fees to sufficiently fund the laboratory data quality recognition program or seek amended legislation to abolish the program.

Without additional funding, DEQ informed us that it does not have the financial resources to implement the laboratory data quality recognition program as required by Sections 324.20501 - 324.20519 of the *Michigan Compiled Laws*.

Section 324.20505 of the *Michigan Compiled Laws* requires that DEQ implement a laboratory data quality recognition program to identify private laboratories that are qualified to generate analytical data for submission to DEQ. Sections 324.20507(b) and 324.20511(2) of the *Michigan Compiled Laws* state that private laboratories shall pay DEQ a fee based on DEQ's actual costs of administering a laboratory data quality recognition program, not to exceed \$750 for an initial application or \$500 for a renewal application. Section 324.20517 of the *Michigan Compiled Laws* created a laboratory data quality assurance advisory council with members to be appointed by the Governor by October 19, 2004. However, council members were never appointed and, on July 15, 2007, the council was abolished by the Governor.

As of October 31, 2007, DEQ had developed but had not completely implemented a laboratory data quality recognition program. On December 11, 2006, DEQ promulgated rules to assist in the administration of the laboratory data quality recognition program. These rules described the application process for private laboratories to participate in the program. However, DEQ had not implemented an application process to develop, distribute, collect, and evaluate program applications. DEQ informed us that it had not received the appropriations necessary to completely implement the laboratory data quality recognition program. For fiscal years 2004-05, 2005-06, and 2006-07, DEQ was appropriated \$15,000,

\$15,400, and \$15,700, respectively, to implement and administer the laboratory data quality recognition program. The application fees in conjunction with the appropriations are not sufficient to cover the costs of the program.

We reviewed two independent studies of the laboratory data quality recognition program's estimated costs and revenues, one by the Senate Fiscal Agency and the other by the State Office of Administrative Hearings and Rules.

According to the Senate Fiscal Agency's bill analysis, the estimated annual costs to administer the program were \$85,000 for the salary and benefits of one employee. The analysis estimated that, with a 100% participation rate by the approximately 60 private laboratories in Michigan, revenues from initial and renewal applications would be \$45,000 and \$30,000, respectively. Exhibit 1, presented as supplemental information, shows a three-year trend of estimated program costs and revenues from the Senate Fiscal Agency's bill analysis. Based on the Senate Fiscal Agency's estimated costs and 100% participation rate, costs would exceed funding from appropriations and fees by approximately \$25,000 in the first year of the program.

According to the State Office of Administrative Hearings and Rules' regulatory impact statement, the estimated annual costs to administer a laboratory data quality recognition program were approximately \$130,000. The estimated costs included salaries and benefits for one laboratory scientist and a part-time administrative assistant, equipment and supplies, travel, and departmental overhead. Also, the regulatory impact statement estimated that 20 (33%) private laboratories would apply to participate in the laboratory data quality recognition program. The estimated revenues generated from initial and renewal application fees for 20 private laboratories would be \$15,000 and \$10,000, respectively. Exhibit 2, presented as supplemental information, shows a three-year trend of estimated program costs and revenues from the State Office of Administrative Hearings and Rules' regulatory impact statement. Based on the Office's estimated costs and 33% participation rate, costs would exceed funding from appropriations and fees by approximately \$100,000 in the first year of the program.

RECOMMENDATION

We recommend that DEQ seek additional appropriations or an increase in fees to sufficiently fund the laboratory data quality recognition program or seek amended legislation to abolish the program.

AGENCY PRELIMINARY RESPONSE

DEQ agrees with the finding and informed us that will assess options regarding the future of the laboratory data quality recognition program, including the option to abolish the program.

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SUPPLEMENTAL INFORMATION

LABORATORY DATA QUALITY ASSURANCE
Department of Environmental Quality

Estimated Costs and Revenues for the Laboratory Data Quality Recognition Program
Based on Bill Analysis

	Projection Based on 60 Participating Laboratories			Projection Based on 8 Participating Laboratories		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Estimated annual program costs	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000	\$ 85,000
Estimated revenues:						
Initial application fees	\$ 45,000	\$	\$	\$ 6,000	\$	\$
Renewal application fees			30,000			4,000
Total estimated revenues	\$ 45,000	\$ 0	\$ 30,000	\$ 6,000	\$ 0	\$ 4,000
Estimated net income (loss)	\$ (40,000)	\$ (85,000)	\$ (55,000)	\$ (79,000)	\$ (85,000)	\$ (81,000)

Source: Senate Fiscal Agency's bill analysis of House Bill Nos. 5472 and 5473.

LABORATORY DATA QUALITY ASSURANCE
Department of Environmental Quality (DEQ)

Estimated Costs and Revenues for the Laboratory Data Quality Recognition Program
Based on Regulatory Impact Statement

	Projection Based on 20 Participating Laboratories			Projection Based on 15 Participating Laboratories		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Estimated annual program costs:						
Salary and benefits (laboratory scientist level 12)	\$ 81,126	\$ 81,126	\$ 81,126	\$ 81,126	\$ 81,126	\$ 81,126
One fourth of the salary and benefits for administrative support	15,422	15,422	15,422	15,422	15,422	15,422
Equipment and supplies	4,000	4,000	4,000	4,000	4,000	4,000
Travel and per diem for on-site inspections	7,500	7,500	7,500	7,500	7,500	7,500
DEQ cost allocation plan	22,000	22,000	22,000	22,000	22,000	22,000
Total estimated annual program costs	<u>\$ 130,048</u>	<u>\$ 130,048</u>	<u>\$ 130,048</u>	<u>\$ 130,048</u>	<u>\$ 130,048</u>	<u>\$ 130,048</u>
Estimated revenues:						
Initial application fees	\$ 15,000	\$	\$	\$ 11,250	\$	\$
Renewal application fees			10,000			7,500
Total estimated revenues	<u>\$ 15,000</u>	<u>\$ 0</u>	<u>\$ 10,000</u>	<u>\$ 11,250</u>	<u>\$ 0</u>	<u>\$ 7,500</u>
Estimated net income (loss)	<u>\$ (115,048)</u>	<u>\$ (130,048)</u>	<u>\$ (120,048)</u>	<u>\$ (118,798)</u>	<u>\$ (130,048)</u>	<u>\$ (122,548)</u>

Source: State Office of Administrative Hearings and Rules' Regulatory Impact Statement 2005-071 EQ.

GLOSSARY

Glossary of Acronyms and Terms

DEQ	Department of Environmental Quality.
effectiveness	Program success in achieving mission and goals.
mission	The agency's main purpose or the reason that the agency was established.
performance audit	An economy and efficiency audit or a program audit that is designed to provide an independent assessment of the performance of a governmental entity, program, activity, or function to improve public accountability and to facilitate decision making by the parties responsible for overseeing or initiating corrective action.
reportable condition	A matter that, in the auditor's judgment, represents either an opportunity for improvement or a significant deficiency in management's ability to operate a program in an effective and efficient manner.

